

neath (or darkening in age), neither sorediate nor granulose, KOH —, CaCl—, (or in combination—); podetia short, stout, cup-forming, cups regular or irregular, imperforate, moderately deep, becoming much expanded (to 14.5 mm. in diameter), the margins entire or repeatedly proliferate, the proliferations one to several, cup-forming or somewhat club-shaped; cortex yellowish, continuous or subcontinuous, smooth or slightly rugose, persistent and *densely covered with small, smooth, subglobose, yellowish squamules*, KOH—, CaCl— (or in combination —); apothecia brown. (PLATE 209, F. 2.)—Type from Upper Geyser Basin, Yellowstone Park, WYOMING, alt. 2240 m., September 6, 1927.—The species is *pyxidata*-like in construction but is distinctly yellow and perhaps not far from *C. carneola* Fr. In the globose-squamulose-covered cortex it resembles *C. santensis* Tuck.

#### EXPLANATION OF PLATE 209.

Fig. 1. *Cladonia elongata* f. *intermedia*. Fig. 2. *C. Blakei*. Fig. 3. *C. scabriuscula* f. *subnuda*. All  $\times 2$ , from the types in herbarium of C. A. Robbins.

## RECENT CONTRIBUTIONS TO THE FLORA OF WISCONSIN

ALVIN L. THRONE

THE first specimen of *Pterospora andromedea* Nutt. to be recorded from Wisconsin was found by the writer August 14, 1928, while collecting specimens for the herbarium of the State Teachers College of Milwaukee. The specimen was found in the extreme southeastern corner of Ozaukee County, on a rather heavily wooded bluff near Lake Michigan, in the locality known as Donges Bay.

This region is only twelve miles from the heart of Milwaukee but due to the area being dissected by several deep ravines, and because of its scenic beauty, it has been left in its natural state. The soil is a stiff, reddish clay. The dominant tree growth is white pine (*Pinus Strobus* L.) this being one of the few places in southeastern Wisconsin where the species is still found in any number. The specimen of *Pterospora* was found on top of a bluff in a somewhat grassy area (*Poa pratensis* L.) about fifteen feet from the base of a white pine. The region was thoroughly searched and another specimen was found about a fourth of a mile in distance from the first. It was growing on the slope of the ravine in hard clay soil which was covered with a carpet of dead pine needles. The only undergrowth was a few bushes of *Juniperus communis* var. *depressa* Pursh. This specimen is herbarium number 66162 of the Milwaukee Public Museum. The roots of *Pterospora* were found to greatly resemble those of the Beech-drops

*Epifagus virginiana* (L.) Bart. No direct connection with the roots of the pine was found.

In 1929 three specimens were found. In 1930, one specimen was found in the same locality, but in the very northeastern corner of Milwaukee County. No judgement can be made at this time as to whether the species is indigenous to Wisconsin or whether it is a recent, accidental introduction, but the above observations indicate that the species is fairly well established in this locality.

Another plant, *Amesia latifolia* (Huds.) Nelson & Macbride, new to the Wisconsin flora, was found by the writer July 24, 1930, and is now in the Milwaukee Public Museum, herbarium number 70396. The specimen was found on the north side of a ravine in Lake Park within the city limits of Milwaukee. Lake Park is one of the largest and oldest parks in the city. Within its boundaries are four ravines, the sides of which are covered with the native vegetation. It was in one of these ravines that the specimen of *Amesia* was found while a Nature Study class from the Milwaukee State Teachers College was studying the vegetation of the slope.

The tree and shrub growth of that particular area is composed of *Crataegus*, *Rhus typhina* L., *Thuja occidentalis* L., *Fraxinus americana* L., and a few Austrian Pines (*Pinus nigra* Arnold). All but the latter are native. The Austrian Pines had apparently been transplanted there some fifteen to twenty years ago. The ground vegetation is entirely native, being largely *Solidago*, *Aster*, and *Osmorhiza longistylis* (Torr.) DC. The soil is hard clay.

Search was made in all the ravines of the park but no other specimens were found. As with *Pterospora*, it is impossible to say if the plant is indigenous or of recent, accidental introduction. Under the conditions where found, the latter seems more probable. However, it is true that any indigenous plant within the park, might have better chances of surviving due to the protection received, than if it were in the country near a large city. Gray's Manual of Botany, Seventh Edition, lists *Amesia* (as *Serapias Helleborine*) as having been found as far west as New York and Pennsylvania. The Wisconsin station thus extends the range of the species about five hundred miles farther west.

Identification of the specimens was verified by Mr. Albert M. Fuller, Assistant Curator of Botany of the Milwaukee Public Museum.

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